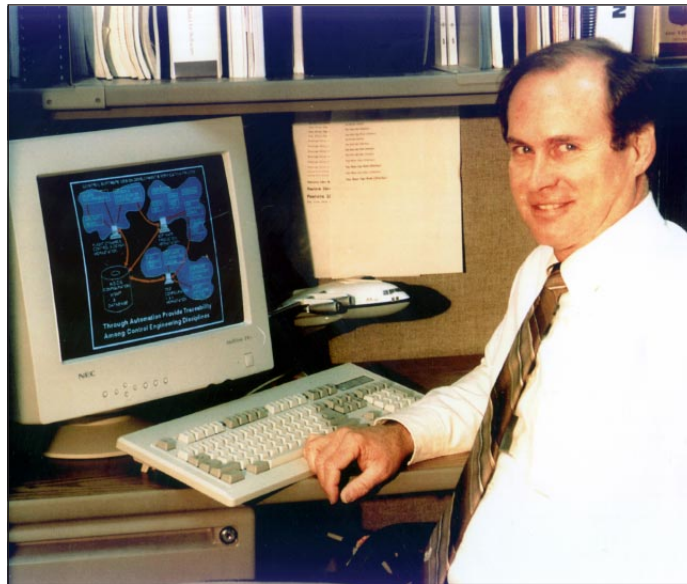




ADA SOFTWARE INTEGRATED DEVELOPMENT/ VERIFICATION SYSTEM (ASIDS) SIMPLIFIES SOFTWARE DEVELOPMENT

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Payoff

ASIDS provides a single software development infrastructure that eliminates many of the time consuming, labor intensive, error prone transformations and interfaces involved in flight critical software development. Widespread use of this environment in the development, test and support of flight critical systems will improve the productivity of software engineers and reduce development time, thereby, reducing overall software cost of ownership. ASIDS technology has been transferred to Lockheed Martin Astronautics for use in their evolved expendable launch vehicle.

Accomplishment

Under a program sponsored by the Air Vehicles Directorate, Honeywell developed the ASIDS, a cradle-to-grave software development tool for flight critical software. This highly automated, user-friendly workstation type environment has the capability for real-time flight critical software design, development, modification, test and traceability among software modules throughout the entire life of the software.

Background

In response to the major thrust area of Technology for Affordability, the ASIDS was conceived to address the DoD critical technology areas of software development, support, producibility, software engineering life cycle technology and computer system configuration management. The ASIDS is a tool environment that links design requirements to the application software, including the verification and validation (V&V) tests required for developing real-time flight critical Ada software. Traditionally, flight control software development has involved three engineering domains: control law development, software system development and control hardware development. The ASIDS environment is unique in that it is the first of its kind to bridge the gap between these engineering disciplines by bringing all control software development under one common tool environment and configuration scheme. The resulting system provides traceability from the control software requirements down to the target hardware, including the V&V tests performed to ensure reliable, functionally correct application software.